

# 5 = PLANT CONSERVATION CENTRES IN SICILY: THE 'VALLE MARIA' REGIONAL CENTRE (GODRANO, PALERMO) AND THE CASE STUDY OF THE RARE *CENTAUREA ERYCINA* (ASTERACEAE)

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*Ex situ* conservation of wild plants in Sicily started thanks the research activities of the Department of Botany Sciences of Palermo University, climaxing in 1992 with the institution of the Seed Bank at the Botanic Garden. This actually represents the oldest scientific structure specifically devoted to wild plant conservation and propagation in our country (1). Soon afterwards, many other seed banks for wild plants spread in Italy, similarly linked to the scientific support of botanists and university Botanic Gardens.

Another Seed Bank in Sicily, distinctively involved in the conservation of wild plants with special target on rare and endangered species, also stands at the Botanic Garden of Catania University, while two big conservation centres belong to the main Regional Authority and are currently headed by the Regional Department of Rural and Territorial Development.

The Sicilian Plant Conservation Centres are located in two far away high-nature-value areas, 'Marianelli' in South-East Sicily (district of Siracusa), inside the "Vendicari" Oriented Natural Reserve and 'Valle Maria' (Godrano) in North-West Sicily (district of Palermo), inside the "Bosco di Ficuzza, Rocca Busambra, Bosco del Cappelliere e Gorgo del Drago" Oriented Natural Reserve. Both Centres have started active collaborations with the geographically related University that provided scientific support and expertise in planning conservation activities and running labs and collection fields.

As far as the conservation activities on wild rare plant species are concerned, the 'Valle Maria' Centre in particular cooperates with the Section of Botany and Plant Ecology - at the Palermo University Department of Biological, Chemical and Pharmaceutical Sciences and Technologies (STEBICEF) – that has always undertaken to technically manage and scientifically improve the Seed Bank collections.

For the purposes of a recently renewed Convention between the two Institutions, research activities were planned and shared with a special focus on *in vitro* and *in vivo* propagation and conservation of endangered endemic species of the Sicilian vascular flora. Among the targeted wild plants there is *Centaurea erycina* Raimondo & Bancheva. This is a very rare graceful species belonging to the daisy family (Asteraceae), up to now only known from its *locus classicus* on Mount Erice (near Trapani). The species is represented by just a single natural population with no more than 100 individuals. Hence, it has been included in the Red List of the Italian flora (2) where it is classified as "critically endangered" (CR) based on the latest IUCN criteria (3). Main threats for this species depend on: 1) habitat alteration and reduction due to the increasing anthropization linked to the touristic relevance of Erice, the historic town located on top of the homonymous mount, 2) reduced seed viability, often dramatically infested by the Fruit Fly *Trupanea amoena* (Frauenfeld, 1857) [Diptera: Tephritidae] (4).

Mature seeds were collected in the field and treated following the international protocols for the management of wild plant germplasm, regarding seed cleaning, dehydration and medium-long term storage, germination tests and related pretreatment or direct seeding (5).

First results from these activities allowed plant propagation and *ex situ* conservation of *C. erycina* in the nursery of 'Valle Maria' Centre and provided more than 200 fertile individuals available for enhancing the native population and promoting the horticultural use of this species.

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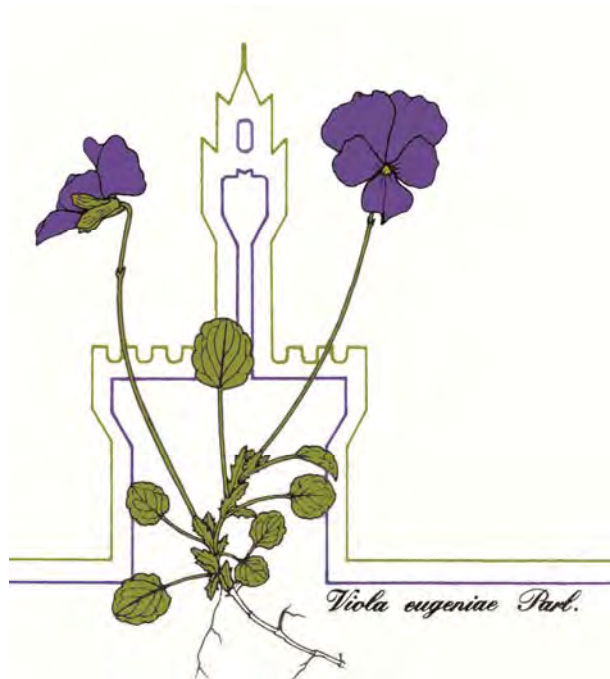
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## ABSTRACTS

**KEYNOTE LECTURES, COMMUNICATIONS, POSTERS**

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